109TH CONGRESS
1ST SESSION

S. 665

To reauthorize and improve the Spark M. Matsunaga Hydrogen Research, Development, and Demonstration Act of 1990 to establish a program to commercialize hydrogen and fuel cell technology, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 17, 2005

Mr. DORGAN (for himself, Mr. GRAHAM, and Mr. AKAKA) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

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A BILL

To reauthorize and improve the Spark M. Matsunaga Hydrogen Research, Development, and Demonstration Act of 1990 to establish a program to commercialize hydrogen and fuel cell technology, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the ''Hydrogen and Fuel Cell Technology Act of 2005''.

(b) TABLE OF CONTENTS.—The table of contents of this Act is as follows:

SEC. 2. HYDROGEN AND FUEL CELL TECHNOLOGY AUTHORIZATION.

The Spark M. Matsunaga Hydrogen Research, Development, and Demonstration Act of 1990 (42 U.S.C. 12401 et seq.) is amended to read as follows:

"SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

"(a) SHORT TITLE.—This Act may be cited as the 'Spark M. Matsunaga Hydrogen Research, Development, and Demonstration Act of 1990.'.

"(b) TABLE OF CONTENTS.—The table of contents of this Act is as follows:

''SEC. 2. DEFINITIONS.

''In this Act:

''(1) CARBON FOOTPRINT.—The term 'carbon footprint' means the sum of carbon equivalent emissions from all energy conversion processes occurring from raw material through hydrogen production, distribution, and use.

''(2) DEPARTMENT.—The term 'Department' means the Department of Energy.

''(3) FUEL CELL.—The term 'fuel cell' means a device that directly converts the chemical energy of a fuel and an oxidant into electricity by electrochemical processes occurring at separate electrodes in the device.

''(4) INFRASTRUCTURE.—The term 'infrastructure' means the equipment, systems, or facilities used to produce, distribute, deliver, or store hydrogen (except for onboard storage).

''(5) SECRETARY.—The term 'Secretary' means the Secretary of Energy.

''(6) STATIONARY; PORTABLE.—The terms 'stationary' and 'portable', when used in reference to a fuel cell, include—

''(A) continuous electric power; and

''(B) backup electric power.

''(7) TASK FORCE.—The term 'Task Force' means the Hydrogen and Fuel Cell Technical Task Force established under section 102(a).

''(8) TECHNICAL ADVISORY COMMITTEE.—The term 'Technical Advisory Committee' means the independent Technical Advisory Committee of the Task Force selected under section 102(d).

''SEC. 3. FINDINGS.

''Congress finds that—

''(1) the United States imports 60 percent of all the oil and products that it consumes, most of it used in transportation;

''(2) there is little fuel diversity in the transportation sector of the United States, making it extremely sensitive to volatile oil supplies;

''(3) rapidly rising energy prices have raised the imported oil bill of the United States to nearly $250,000,000,000 in 2004, which is a direct offshore wealth transfer from the U.S. that could oth-

erwise be invested in a hydrogen economy to create many new jobs;

''(4) although the United States has become a more efficient and cleaner user of energy, total energy use continues to grow as the economy expands, along with total vehicle emissions;

''(5) without dramatic action, 68 percent of oil demand will come from imports by 2025;

''(6) over the next 10 years, oil imports could cost nearly $3,000,000,000,000, while protecting foreign supplies adds even more to that cost;

''(7) hydrogen and fuel cells offer the best hope of realizing more efficient, cleaner means of regaining control of the energy security of the United States, and achieving quality economic growth;

''(8) in the spirit of the Apollo project that put us on the Moon, and the practical vision that built the United States interstate highway system, the U.S. needs to commit sufficient public investment to develop and commercialize hydrogen and fuel cell technologies, in partnership with our private sector; and

''(9) economies must grow to sustain their health, and strong public investments in research and development will harness the skills of our uni-

versities, national laboratories, and innovative private industry to create the hydrogen economy.

"SEC. 4. PURPOSES.

"The purposes of this Act are—

"(1) to enable and promote comprehensive development, demonstration, and commercialization of hydrogen and fuel cell technology in partnership with industry;

"(2) to make critical public investments in building strong links to private industry, universities, national laboratories, and research institutions to expand innovation and industrial growth;

"(3) to build a mature hydrogen economy that creates fuel diversity in the massive transportation sector of the United States;

"(4) to sharply decrease the dependency of the United States on imported oil, eliminate most emissions from the transportation sector, and greatly enhance our energy security; and

"(5) to create, strengthen, and protect a sustainable national energy economy.

"TITLE I—HYDROGEN AND FUEL CELLS

"SEC. 101. HYDROGEN AND FUEL CELL TECHNOLOGY RESEARCH AND DEVELOPMENT.

''(a) IN GENERAL.—The Secretary, in consultation with other Federal agencies and the private sector, shall conduct a research and development program on technologies relating to the production, purification, distribution, storage, and use of hydrogen energy, fuel cells, and related infrastructure.

''(b) GOAL.—The goal of the program shall be to demonstrate and commercialize the use of hydrogen for transportation (in light and heavy vehicles), utility, industrial, commercial, residential, and defense applications.

''(c) FOCUS.—In carrying out activities under this section, the Secretary shall focus on mutually supportive developmental factors that are common to the development of hydrogen infrastructure and the supply of vehicle and electric power for critical consumer and commercial applications, and that achieve continuous technical evolution and cost reduction, particularly for hydrogen production, the supply of hydrogen, storage of hydrogen, and end uses of hydrogen that—

''(1) steadily increase production, distribution, and end use efficiency and reduce carbon footprints;

''(2) resolve critical problems relating to catalysts, membranes, storage, lightweight materials, electronic controls, and other problems that emerge from research and development;

''(3) enhance sources of renewable fuels and biofuels for hydrogen production; and

''(4) enable widespread use of distributed electricity generation and storage.

''(d) PUBLIC EDUCATION AND RESEARCH.—In carrying out this section, the Secretary shall support enhanced public education and university research in fundamental sciences, application design, and systems concepts (including education and research relating to materials, subsystems, manufacturability, maintenance, and safety) relating to hydrogen and fuel cells.

''(e) FUNDING.—

''(1) IN GENERAL.—The Secretary shall carry out the activities under this section through a competitive, merit-based review process consistent with any generally applicable Federal law (including regulations) that applies to an award of financial assistance, a contract, or another agreement.

''(2) RESEARCH CENTERS.—The Secretary may provide funds to a university-based or Federal lab-

oratory or research center in accordance with paragraph (1) to carry out an activity under this section.

''(f) COST SHARING.—

''(1) IN GENERAL.—Except as provided in paragraph (2), the Federal share of the cost of carrying out any project or activity under this section shall be 80 percent.

''(2) WAIVER OF NON-FEDERAL SHARE.—The Secretary may waive the non-Federal share of the cost of carrying out a project or activity under this section if the non-Federal share would otherwise be paid by a small business or an institution of higher education (as defined in section 102 of the Higher Education Act of 1965 (20 U.S.C. 1002)), as determined by the Secretary.

''SEC. 102. TASK FORCE.

''(a) ESTABLISHMENT.—The Secretary, in cooperation with the Secretary of Defense, the Secretary of Transportation, and the Secretary of Commerce, shall establish an interagency Task Force, to be known as the 'Hydrogen and Fuel Cell Technical Task Force' to advise the Secretary in carrying out programs under this Act.

''(b) MEMBERSHIP.—

''(1) IN GENERAL.—The Task Force shall be comprised of such representatives of the Council on

Environmental Quality, the Office of Science and Technology Policy, the Council of Economic Advisors, the Environmental Protection Agency, and the National Security Council, and such other representatives of Federal agencies, conferences of governors, and regional organizations, as the Secretary, Secretary of Defense, Secretary of Transportation, and Secretary of Commerce determine to be appropriate.

''(2) VOTING.—A member of the Task Force that does not represent a Federal agency shall serve on the Task Force only in a nonvoting, advisory capacity.

''(c) DUTIES.—The Task Force shall review and make any necessary recommendations to the Secretary on implementation and conduct of programs under this Act.

''(d) TECHNICAL ADVISORY COMMITTEE.—

''(1) IN GENERAL.—The Secretary shall select such number of members as the Secretary considers to be appropriate to form an independent, nonpolitical Technical Advisory Committee.

''(2) MEMBERSHIP.—

''(A) IN GENERAL.—Each member of the Technical Advisory Committee shall have scientific, technical, or industrial expertise, as determined by the Secretary.

''(B) NATIONAL LABORATORIES.—At least 1 member of the Technical Advisory Committee shall represent a national laboratory.

''(3) DUTIES.—The Technical Advisory Committee shall provide technical advice and assistance to the Task Force and the Secretary.

''SEC. 103. TECHNOLOGY TRANSFER.

''In carrying out this Act, the Secretary shall carry out programs that—

''(1) provide for the transfer of critical hydrogen and fuel cell technologies to the private sector;

''(2) accelerate wider application of those technologies in the global market;

''(3) foster the exchange of generic, nonproprietary information; and

''(4) assess technical and commercial viability of technologies relating to the production, distribution, storage, and use of hydrogen energy and fuel cells.

''SEC. 104. AUTHORIZATION OF APPROPRIATIONS.

''(a) HYDROGEN SUPPLY.—There are authorized to be appropriated to carry out projects and activities relating to hydrogen production, storage, distribution and dispensing, transport, education and coordination, and technology transfer under this title—

''(1) $200,000,000 for fiscal year 2006;

''(2) $210,000,000 for fiscal year 2007;

''(3) $220,000,000 for fiscal year 2008;

''(4) $230,000,000 for fiscal year 2009;

''(5) $250,000,000 for fiscal year 2010;

''(6) $240,000,000 for fiscal year 2011;

''(7) $230,000,000 for fiscal year 2012;

''(8) $220,000,000 for fiscal year 2013;

''(9) $180,000,000 for fiscal year 2014; and

''(10) $120,000,000 for fiscal year 2015.

''(b) FUEL CELL TECHNOLOGIES.—There are authorized to be appropriated to carry out projects and activities relating to fuel cell technologies under this title—

''(1) $160,000,000 for fiscal year 2006;

''(2) $170,000,000 for fiscal year 2007;

''(3) $180,000,000 for fiscal year 2008;

''(4) $200,000,000 for fiscal year 2009;

''(5) $210,000,000 for fiscal year 2010;

''(6) $200,000,000 for fiscal year 2011;

''(7) $190,000,000 for fiscal year 2012;

''(8) $170,000,000 for fiscal year 2013;

''(9) $150,000,000 for fiscal year 2014; and

''(10) $100,000,000 for fiscal year 2015.

"TITLE II—HYDROGEN AND FUEL CELL DEMONSTRATION

"SEC. 201. HYDROGEN SUPPLY AND FUEL CELL DEMONSTRATION PROGRAM.

''(a) IN GENERAL.—The Secretary, in consultation with the Task Force and the Technical Advisory Committee, shall carry out a program to demonstrate developmental hydrogen and fuel cell systems for mobile, portable, and stationary uses, using improved versions of the learning demonstrations program concept of the Department, including demonstrations involving—

''(1) light duty vehicles;

''(2) fleet delivery vans;

''(3) heavier duty vehicles;

''(4) specialty industrial and farm vehicles; and

''(5) commercial and residential portable, continuous, and backup electric power generation.

''(b) OTHER DEMONSTRATION PROGRAMS.—To develop widespread hydrogen supply and use options, and assist evolution of technology, the Secretary shall—

''(1) carry out demonstrations of evolving hydrogen and fuel cell technologies in national parks, remote island areas, and on Indian tribal land, as selected by the Secretary;

''(2) in accordance with any code or standards developed in a region, fund prototype, pilot fleet, and infrastructure regional hydrogen supply corridors along the interstate highway system in varied climates across the United States; and

''(3) fund demonstration programs that explore the use of hydrogen blends, hybrid hydrogen, and hydrogen reformed from renewable agricultural fuels, including the use of hydrogen in hybrid electric, heavier duty, and advanced internal combustion-powered vehicles.

''(c) SYSTEM DEMONSTRATIONS.—

''(1) IN GENERAL.—As a component of the demonstration program under this section, the Secretary shall provide grants, on a cost share basis as appropriate, to eligible entities (as determined by the Secretary) for use in—

''(A) devising system design concepts that provide for the use of advanced composite vehicles in programs under title III that—

''(i) have as a primary goal the reduction of drive energy requirements;

''(ii) after 2010, add another research and development phase to the vehicle and infrastructure partnerships developed

under the learning demonstrations program concept of the Department; and

''(iii) are managed through an enhanced FreedomCAR program within the Department that encourages involvement in cost-shared projects by domestic and international manufacturers and governments; and

''(B) designing a local distributed energy system that—

''(i) incorporates renewable hydrogen production, off-grid electricity production, and fleet applications in industrial or commercial service;

''(ii) integrates energy or applications described in clause (i), such as stationary, portable, micro, and mobile fuel cells, into a high-density commercial or residential building complex or agricultural community; and

''(iii) is managed in cooperation with industry, State, tribal, and local governments, agricultural organizations, and nonprofit generators and distributors of electricity.

''(2) COST SHARING.—The Federal share of the cost of a project or activity carried out using funds from a grant under paragraph (1) shall not exceed 50% percent, as determined by the Secretary.

''(d) IDENTIFICATION OF NEW RESEARCH AND DEVELOPMENT REQUIREMENTS.—In carrying out the demonstrations under subsection (a), the Secretary, in consultation with the Task Force and the Technical Advisory Committee, shall—

''(1) after 2008 for stationary and portable applications, and after 2010 for vehicles, identify new research and development requirements that refine technological concepts, planning, and applications; and

''(2) during the second phase of the learning demonstrations under subsection (c)(1)(A)(ii), redesign subsequent research and development to incorporate those requirements.

''SEC. 202. AUTHORIZATION OF APPROPRIATIONS.

''There are authorized to be appropriated to carry out this title—

''(1) $185,000,000 for fiscal year 2006;

''(2) $200,000,000 for fiscal year 2007;

''(3) $300,000,000 for fiscal year 2008;

''(4) $350,000,000 for fiscal year 2009;

''(5) $425,000,000 for fiscal year 2010;

''(6) $335,000,000 for fiscal year 2011;

''(7) $310,000,000 for fiscal year 2012;

''(8) $270,000,000 for fiscal year 2013;

''(9) $200,000,000 for fiscal year 2014; and

''(10) $100,000,000 for fiscal year 2015.

''TITLE III—TRANSITION TO MARKET

''SEC. 301. FEDERAL PROCUREMENT OF FUEL CELL VEHICLES AND HYDROGEN ENERGY SYSTEMS.

''(a) PURPOSES.—The purposes of this section are—

''(1) to stimulate acceptance by the market of fuel cell vehicles and hydrogen energy systems;

''(2) to support development of technologies relating to fuel cell vehicles, public refueling stations, and hydrogen energy systems; and

''(3) to require the Federal government, which is the largest single user of energy in the United States, to adopt those technologies as soon as practicable after the technologies are developed, in conjunction with private industry partners.

''(b) FEDERAL LEASES AND PURCHASES.—

''(1) REQUIREMENT.—

''(A) IN GENERAL.—Not later than January 1, 2010, the head of any Federal agency

that uses a light-duty or heavy-duty vehicle fleet shall lease or purchase fuel cell vehicles and hydrogen energy systems to meet any applicable energy savings goal described in subsection (c).

''(B) LEARNING DEMONSTRATION VEHICLES.—The Secretary may lease or purchase appropriate vehicles developed under the learning demonstrations program concept of the Department under title II to meet the requirement in subparagraph (A).

''(2) COSTS OF LEASES AND PURCHASES.—

''(A) IN GENERAL.—The Secretary, in cooperation with the Task Force and the Technical Advisory Committee, shall pay to Federal agencies (or share the cost under interagency agreements) the difference in cost between—

''(i) the cost to the agencies of leasing or purchasing fuel cell vehicles and hydrogen energy systems under paragraph (1); and

''(ii) the cost to the agencies of a feasible alternative to leasing or purchasing fuel cell vehicles and hydrogen energy systems, as determined by the Secretary.

''(B) COMPETITIVE COSTS AND MANAGEMENT STRUCTURES.—In carrying out subparagraph (A), the Secretary, in consultation with the agency, may use the General Services Administration or any commercial vendor to ensure—

''(i) a cost-effective purchase of a fuel cell vehicle or hydrogen energy system; or

''(ii) a cost-effective management structure of the lease of a fuel cell vehicle or hydrogen energy system.

''(3) EXCEPTION.—

''(A) IN GENERAL.—If the Secretary determines that the head of an agency described in paragraph (1) cannot find an appropriately efficient and reliable fuel cell vehicle or hydrogen energy system in accordance with paragraph (1), that agency shall be excepted from compliance with paragraph (1).

''(B) CONSIDERATION.—In making a determination under subparagraph (A), the Secretary shall consider—

''(i) the needs of the agency; and

''(ii) an evaluation performed by—

''(I) the Task Force; or

''(II) the Technical Advisory Committee.

''(c) ENERGY SAVINGS GOALS.—

''(1) IN GENERAL.—

''(A) REGULATIONS.—Not later than December 31, 2006, the Secretary shall—

''(i) in cooperation with the Task Force, promulgate regulations for the period of 2008 through 2010 that extend and augment energy savings goals for each Federal agency, in accordance with any Executive order issued after March 2000; and

''(ii) promulgate regulations to expand the minimum Federal fleet requirement and credit allowances for fuel cell vehicle systems under section 303 of the Energy Policy Act of 1992 (42 U.S.C. 13212).

''(B) REVIEW, EVALUATION, AND NEW REGULATIONS.—Not later than December 31, 2010, the Secretary shall—

''(i) review the regulations promulgated under subparagraph (A);

"(ii) evaluate any progress made toward achieving energy savings by Federal agencies; and

"(iii) promulgate new regulations for the period of 2011 through 2015 to achieve additional energy savings by Federal agencies relating to technical and cost-performance standards.

"(2) OFFSETTING ENERGY SAVINGS GOALS.—An agency that leases or purchases a fuel cell vehicle or hydrogen energy system in accordance with subsection (b)(1) may use that lease or purchase to count toward an energy savings goal of the agency.

"(3) USE OF ENERGY SAVINGS PERFORMANCE CONTRACTS.—An agency that leases or purchases a fuel cell vehicle or hydrogen energy system in accordance with subsection (b)(1) may use any energy savings performance contract under title VIII of the National Energy Conservation Policy Act (42 U.S.C. 8287 et seq.) (including a pilot program for mobility uses in an expanded energy savings performance contract) to count toward an energy savings goal of the agency.

"(d) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section—

''(1) $10,000,000 for fiscal year 2008;

''(2) $15,000,000 for fiscal year 2009;

''(3) $50,000,000 for fiscal year 2010;

''(4) $100,000,000 for fiscal year 2011;

''(5) $150,000,000 for fiscal year 2012;

''(6) $165,000,000 for fiscal year 2013;

''(7) $195,000,000 for fiscal year 2014; and

''(8) $200,000,000 for fiscal year 2015.

''SEC. 302. FEDERAL PROCUREMENT OF STATIONARY, PORTABLE, AND MICRO FUEL CELLS.

''(a) PURPOSES.—The purposes of this section are—

''(1) to stimulate acceptance by the market of stationary, portable, and micro fuel cells; and

''(2) to support development of technologies relating to stationary, portable, and micro fuel cells.

''(b) FEDERAL LEASES AND PURCHASES.—

''(1) IN GENERAL.—Not later than January 1, 2006, the head of any Federal agency that uses electrical power from stationary, portable, or microportable devices shall lease or purchase a stationary, portable, or micro fuel cell to meet any applicable energy savings goal described in subsection (c).

''(2) COSTS OF LEASES AND PURCHASES.—

''(A) IN GENERAL.—The Secretary, in cooperation with the Task Force and the Tech-

nical Advisory Committee, shall pay the cost to Federal agencies (or share the cost under interagency agreements) of leasing or purchasing stationary, portable, and micro fuel cells under paragraph (1).

''(B) COMPETITIVE COSTS AND MANAGEMENT STRUCTURES.—In carrying out subparagraph (A), the Secretary, in consultation with the agency, may use the General Services Administration or any commercial vendor to ensure—

''(i) a cost-effective purchase of a stationary, portable, or micro fuel cell; or

''(ii) a cost-effective management structure of the lease of a stationary, portable, or micro fuel cell.

''(3) EXCEPTION.—

''(A) IN GENERAL.—If the Secretary determines that the head of an agency described in paragraph (1) cannot find an appropriately efficient and reliable stationary, portable, or micro fuel cell in accordance with paragraph (1), that agency shall be excepted from compliance with paragraph (1).

"(B) CONSIDERATION.—In making a determination under subparagraph (A), the Secretary shall consider—

"(i) the needs of the agency; and

"(ii) an evaluation performed by—

"(I) the Task Force; or

"(II) the Technical Advisory Committee of the Task Force.

"(c) ENERGY SAVINGS GOALS.—

"(1) OFFSETTING ENERGY SAVINGS GOALS.—An agency that leases or purchases a stationary, portable, or micro fuel cell in accordance with subsection (b)(1) may use that lease or purchase to count toward an energy savings goal described in section 301(c)(1) that is applicable to the agency.

"(2) USE OF ENERGY SAVINGS PERFORMANCE CONTRACTS.—An agency that leases or purchases a stationary, portable, or micro fuel cell in accordance with subsection (b)(1) may use any energy savings performance contract under title VIII of the National Energy Conservation Policy Act (42 U.S.C. 8287 et seq.) (including a pilot program in an expanded energy savings performance contract) to count toward an energy savings goal of the agency.

''(d) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section—

''(1) $20,000,000 for fiscal year 2006;

''(2) $50,000,000 for fiscal year 2007;

''(3) $75,000,000 for fiscal year 2008;

''(4) $100,000,000 for fiscal year 2009;

''(5) $100,000,000 for fiscal year 2010;

''(6) $100,000,000 for fiscal year 2011;

''(7) $55,000,000 for fiscal year 2012;

''(8) $50,000,000 for fiscal year 2013;

''(9) $50,000,000 for fiscal year 2014; and

''(10) $25,000,000 for fiscal year 2015.

''TITLE IV—REGULATORY MANAGEMENT

''SEC. 401. CODES AND STANDARDS.

''(a) IN GENERAL.—The Secretary, in cooperation with the Task Force, shall provide grants to, or offer to enter into contracts with such professional organizations, public service organizations, and government agencies as the Secretary determines appropriate to support timely and extensive development of safety codes and standards relating to fuel cell vehicles, hydrogen energy systems, and stationary, portable, and micro fuel cells.

''(b) EDUCATIONAL EFFORTS.—The Secretary shall support educational efforts by organizations and agencies

described in subsection (a) to share information, including information relating to best practices, among those organizations and agencies.

''SEC. 402. AUTHORIZATION OF APPROPRIATIONS.

''There is authorized to be appropriated to carry out this title—

''(1) $4,000,000 for fiscal year 2006;

''(2) $7,000,000 for fiscal year 2007;

''(3) $8,000,000 for fiscal year 2008;

''(4) $8,000,000 for fiscal year 2009;

''(5) $10,000,000 for fiscal year 2010;

''(6) $9,000,000 for fiscal year 2011; and

''(7) $9,000,000 for fiscal year 2012.

''TITLE V—REPORTS

''SEC. 501. DEPLOYMENT OF HYDROGEN TECHNOLOGY.

''(a) SECRETARY.—Subject to subsection (c), not later than 2 years after the date of enactment of the Hydrogen and Fuel Cell Technology Act of 2005, and biannually thereafter, the Secretary shall submit to Congress—

''(1) a report describing—

''(A) any activity carried out by the Department of Energy under this Act, including a research, development, demonstration, and com-

mercial application program for hydrogen and fuel cell technology;

''(B) measures the Secretary has taken during the preceding 2 years to support the transition of primary industry (or a related industry) to a fully-commercialized hydrogen economy;

''(C) any change made to a research, development, or deployment strategy of the Secretary relating to hydrogen and fuel cell technology to reflect the results of a learning demonstration under title II;

''(D) progress, including progress in infrastructure, made toward achieving the goal of producing and deploying not less than—

''(i) 100,000 hydrogen-fueled vehicles in the United States by 2010; and

''(ii) 2,500,000 hydrogen-fueled vehicles by 2020;

''(E) progress made toward achieving the goal of supplying hydrogen at a sufficient number of fueling stations in the United States by 2010 can be achieved by integrating—

''(i) hydrogen activities; and

''(ii) associated targets and timetables for the development of hydrogen technologies;

''(F) any problem relating to the design, execution, or funding of a program under this Act; and

''(G) progress made toward and goals achieved in carrying out this Act and updates to the developmental roadmap, including the results of the reviews conducted by the National Academy of Sciences under subsection (d) for the fiscal years covered by the report; and

''(2) a strategic plan describing—

''(A) a remedy for any problems described in paragraph (1)(D); and

''(B) any approach by which the Secretary could achieve a substantial decrease in the dependence on and consumption of natural gas and imported oil by the Federal Government, including by increasing the use of fuel cell vehicles, stationary and portable fuel cells, and hydrogen energy systems described in title III.

''(b) TASK FORCE.—Subject to subsection (c), not later than 3 years after the date of enactment of the Hydrogen and Fuel Cell Technology Act of 2005, and tri-

ennially thereafter, the Task Force shall submit to Congress a report describing—

''(1) the degree of success of each program under this Act; and

''(2) the degree to which the success of programs under this Act has led to evolution of a hydrogen economy and improved potential for economic growth.

''(c) COMBINATION OF REPORTS.—

''(1) IN GENERAL.—The Secretary may decide to combine the reports under subsections (a) and (b) before the reports are submitted to Congress, as the Secretary determines appropriate.

''(2) REQUIREMENTS.—If the Secretary decides to combine the reports under paragraph (1), the Secretary shall—

''(A) not later than 2 years after the date of enactment of the Hydrogen and Fuel Cell Technology Act of 2005, provide notice of the decision to the Task Force; and

''(B) not later than 3 years after the date of enactment of the Hydrogen and Fuel Cell Technology Act of 2005, and triennially thereafter, submit the combined reports to Congress.

''(3) TASK FORCE.—Not later than 180 days after receiving notice from the Secretary under paragraph (2)(A), and triennially thereafter, the Task Force shall submit to the Secretary a report in accordance with subsection (b).

''(d) NATIONAL ACADEMY OF SCIENCES.—

''(1) IN GENERAL.—Not later than September 30, 2007, and triennially thereafter, the National Academy of Sciences shall conduct and submit to the Secretary—

''(A) the results of a review of the projects and activities carried out under this Act; and

''(B) recommendations for any new authorities or resources needed to achieve strategic goals.

''(2) REAUTHORIZATION.—The Secretary shall use the results of reviews conducted under paragraph (1) in proposing to Congress any legislative changes relating to reauthorization of this Act.

''SEC. 502. AUTHORIZATION OF APPROPRIATIONS.

''There is authorized to be appropriated to carry out this title $900,000 for each of fiscal years 2006 through 2015.

"TITLE VI—TERMINATION OF AUTHORITY

"SEC. 601. TERMINATION OF AUTHORITY.

''This Act and the authority provided by this Act terminate on September 30, 2015.''.

SEC. 3. TAX INCENTIVES TO BUILD THE HYDROGEN ECONOMY.

It is the sense of the Senate that Congress should provide any necessary tax incentives to encourage investment in and production and use of hydrogen and fuel cell systems during critical stages of market growth, including—

(1) a hydrogen fuel cell motor vehicle credit;

(2) a credit for the installation of hydrogen fuel cell motor vehicle fueling stations;

(3) a credit for residential fuel cell property; and

(4) a credit for business installation of qualified fuel cells.

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